

Appl. No.: 10/769,101
Suppl. Amdt. Dated November 17, 2005
Reply to Office Action Dated September 19, 2005

Amendments to the Drawings

The attached sheets of drawings include formal drawings for Figures 1-7 and reflecting changes to Figure 4 as suggested by the examiner. These sheets, which include Figures 1-7, replace the original sheets including Figures 1-7.

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REMARKS

Claims 1-20 are pending in the application. Claims 1 and 10 have been amended. Support for the amendments may be found throughout the specification, and particularly at pages 9-11 and Figures 2A, 3A and 4A. No new matter has been added. Applicants respectfully submit that the amendments place the application in a condition for allowance, and request favorable consideration of the application in light of the above amendments and following remarks.

Objections to the Drawings and Claims

The objections to the drawings and claims have been obviated by appropriate amendments. Applicants have attached formal drawings correcting the objections noted by the Examiner.

Rejections Pursuant 35 U.S.C. § 102

Claims 1-3, 10-14, and 16-20 have been rejected under 35 U.S.C. 102(e) as being anticipated by *Hsu, et al.* (US Pat. No. 6,617,637). Claims 1-10 and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by *Wang* (US Pat. No. 5,886,378). Applicants respectfully submit that neither *Hsu* nor *Wang* disclose the limitations of the pending claims.

Independent claim 1 relates to an electrically programmable transistor fuse having, *inter alia*, source and drain regions disposed in a substrate of semiconductor material having a first conductivity type. Independent claim 10 relates to a programmable fuse cell having, *inter alia*, source and drain regions also disposed in a substrate of semiconductor material having a first conductivity type. In the transistor fuse of claim 1 and the programmable fuse cell of claim 10, the source and drain regions are "spaced apart to define a substantially continuous channel region of monolithic substrate material therebetween."

The cited reference to *Hsu*, on the other hand, relates to first and second transistors 101 and 102, where the first transistor 101 has a floating gate 122 and the second transistor 124 has a select gate. (Col. 3, ll. 17-51). A P+ doped region 132 is disposed between the floating gate 122 and the select gate 124 and serially connects the transistors 101 and 102. (Col. 3, ll. 23-25 and

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42-44). The P+ doped region 132 is a drain of transistor 101 and also a source for transistor 102. (Col. 3, ll. 47-49). Figures 2a, 2b, and 3 of *Hsu* illustrate that the P+ doped region 132 is located in the channel between P+ doped region 136 and P+ doped region 140. Accordingly, to the extent *Hsu* describes a channel defined by the region between P+ doped region 136 and P+ doped region 140, that channel includes the P+ doped region 136, which serially connects the transistors and acts as a source/drain region for the serially connected transistors 101 and 102.

Likewise, *Wang* relates to an EEPROM device having a gate 156 and floating gate 160 each overlying a P-region between N-regions 136 and 140. (Col. 3, ll. 10-17). Figures 5 and 6 illustrate that the N-region 138 is located in a channel defined between regions 136 and 140. Gate 156 and floating gate 160 both overlay the N-region 138, which is the source for transistor 162 and is "connected to the drain 138 of the first transistor 158." (Col. 3, ll. 17-23). Transistors 156 and 162 are also connected to each other through the connection of N-region 138 between gates 156 and 162. (Col. 3, ll. 42-44). Accordingly, to the extent *Wang* describes a channel defined by the region between N-regions 136 and 140, that channel includes an N-region 138.

Neither *Hsu* nor *Wang* disclose the electrically programmable transistor fuse of claim 1 or the programmable fuse cell of claim 10. Both *Hsu* and *Wang* disclose a non-uniform, disconnected channel region between a source and drain. In particular, in *Hsu* a P+ doped region is located in a channel region defined between P+ doped regions 136 and 140 and in *Wang*, an N-region 138 is located in the channel between N-regions 136 and 140. Because the channel regions include the P+ doped region (*Hsu*) or the N-region (*Wang*), neither channel is continuous. Since the channel regions of *Hsu* and *Wang* include material other than a substrate material, the channels of *Hsu* and *Wang* are not monolithic substrate material. To the contrary, the channel regions of *Hsu* and *Wang* are disconnected and consist of a grouping, or assemblage, of materials. The channel region between the source and drain as recited in claims 1 and 10, on the other hand, is "substantially continuous" and "monolithic." Therefore, the channel regions of claims 1 and 10 is uniform without a P+ doped region of *Hsu* or the N-region of *Wang*. Accordingly, limitations of claims 1 and 10 are entirely missing in the cited art. Applicants respectfully submit that the amendments place claims 1 and 10 in a condition for allowance.

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Dependent Claims 2-9 and 11-20

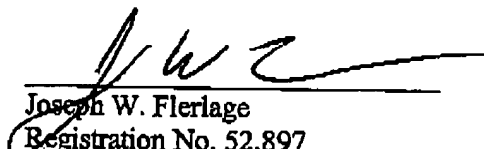
Applicants also respectfully submit that dependent claims 2-9 and 11-20 are not anticipated by the cited art. As discussed, limitations for independent claims 1 and 10 are not disclosed by the cited art. Therefore, the limitations of the claims dependent therefrom are also not disclosed or fairly suggested by the cited combination. Accordingly, Applicants respectfully submit that claims 2-9 and 11-20 are not anticipated.

CONCLUSION

In view of the foregoing, Applicant respectfully requests favorable consideration and allowance for all pending claims. If the examiner believes that a telephone conference would expedite allowance of the application, the examiner is invited to call the undersigned.

Respectfully submitted,

November 17, 2005



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